

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s): Sheng Ye et al.
Docket No.: CN920020009US1
Serial No.: 10/689,186
Filing Date: October 20, 2003
Group: 2176
Examiner: Nathan Hillery

Title: Method and Apparatus for Locating and Transforming Data

REPLY BRIEF

Commissioner for Patents
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Sir:

The remarks which follow are submitted in response to the Examiner's Answer dated April 1, 2009, in the above-identified application. The arguments presented by Appellants in the corresponding Appeal Brief are hereby incorporated by reference herein.

In Section 10 of the Answer, on pages 8-14 thereof, the Examiner responds to various arguments raised by Appellants in the Appeal Brief.

ARGUMENT

1. Rejection of claims 23-42 under 35 U.S.C. §112, first paragraph (pages 8-10 of the Answer)

The Examiner contends that certain limitations recited in independent claim 23 identified in the final Office Action as limitations “A,” “B,” and “C,” are neither described nor enabled by the originally-filed specification. Appellants respectfully disagree.

Limitation “A” is directed to transferring the at least one data unit from the one or more locations within the at least one input file to the one or more locations within the first output file specified by a mapping of the at least one data unit of the at least one input file to one or more locations within the first output file.

In the Answer at page 9, second and third paragraphs, the Examiner argues (with emphasis added):

[L]imitation ‘A’ recites the transference of data units from one location within the input file to another location within the output file specified by a mapping of the locations. The accompanying support cited by the applicant discloses transferring data in an original file into data in an objective file. Specifically, each of the data units is mapped to a corresponding format. Although the data units are ‘located’, the locations of the data units are not mapped so as to ‘relocate’ them to another file as now required by the claim. The skilled artisan would understand the disclosure to mean that the data units are simply being transformed into a different file format, which the skilled artisan would differentiate from ‘relocating’ data units in one file to another. These are two completely different processes, which have two completely different utilities. Not only does the level of detail required by the claim not rise to the level disclosed by the specification but the concepts disclosed in the specification are different from the concepts required of the claim.

Appellants respectfully submit that, by the Examiner’s own admission, the portions of the specification previously cited by Appellants disclose “transferring data in an original file into an objective file,” in which “the data units are ‘located’” within the original file, and then “each of the data units is mapped to a corresponding format” which specifies a location for that data unit within the objective file. Thus, the cited portions of the specification clearly disclose “‘relocating’ data units in one file from another.”

More particularly, as discussed by Appellants in the Appeal Brief, limitation “A” (including what the Examiner characterizes as “relocating”) is clearly supported by the specification at, for example, page 31, lines 11-19, and page 32, lines 8-12 (emphasis added):

The format mapping unit 402 builds up the correspondence between the data units located by the data locating device 401 and the format of the objective data file.

When the location descriptions of the data units in a source data file needed to be located are generated, each of the data units determined to be located is mapped to the corresponding format (corresponding area) of the objective data file, according to the format feature of the objective data file, so as to transform the data in the original data file into the data in the objective data file. Then the corresponding relationship between the data units to be located and the format of the objective data file need to be built up. . . .

The data transforming unit 405 transforms the data units extracted by the data extracting unit 404 into the data in the objective data file having a specific format or outputs the data into the corresponding areas in the objective data file, based on the correspondence relationship between the data units to be located and the specific format of the objective data file built up by the format mapping unit 402.

See also the specification at, for example, page 4, lines 3-4; page 7, lines 12-14; page 9, lines 1-4; page 11, lines 16-19; and page 34, 4-7 and 17-18.

Limitation “B” specifies that each location comprises a horizontal position, the horizontal position comprising at least one of an uppermost position of the data unit or a lowermost position of the data unit, and a vertical position, the vertical position comprising at least one of the leftmost position of the data unit or the rightmost position of the data unit.

In the Answer at page 10, first paragraph, the Examiner argues that “the accompanying support cited by applicant discloses that it takes four types of location elements to determine a single position of a data unit.” Thus, the Examiner apparently contends that the originally-filed specification requires that a data unit must be specified using an uppermost position of the data unit, a lowermost position of the data unit, the leftmost position of the data unit and the rightmost position

of the data unit, and that any other arrangement is the product of “hindsight . . . that was not apparent or available at the time of the time of the originally filed specification.”

Appellants respectfully disagree. The Examiner is reading too much into the specification at page 17, lines 10-14, which states:

Four types of location elements are used to determine the position of a data unit, according to the invention, that is, the “top (Top)” representing the uppermost position of the data unit; the “bottom (Bottom)” representing the lowest position of the data unit; the “left (Left)” representing the most left position of the data unit, and the “right (Right)” representing the most right position of the data unit.

This portion of the specification enumerates four types of locations elements which may be used to determine the position of a given data unit, but does not state that all four must be used to determine the position of a given data unit. Indeed, the specification at page 22, lines 10-13, explicitly states that the “description includes the type of the data unit, one or more location elements for locating the data unit. The location elements includes [sic] ‘Top’, ‘Bottom’, ‘Left’ and ‘Right’.” (emphasis added). Similar statements are also found in the specification at, for example, page 4, lines 19-20; page 6, lines 8-9; page 8, lines 5-6; and page 10, lines 16-17.

Moreover, the specification provides specific examples of data units described using a subset of the four enumerated location elements. See, for example, the specification at page 19, line 20, to page 20, line 5, and at page 26, line 6, to page 27, line 20, each of which includes a description of a data unit using only “Top,” “Left” and “Right” location elements and without a “Bottom” location element. More generally, see the specification at, for example, page 20, lines 12-13 (“It will be apparent for the persons in the art to flexibly employ the attributes to describe the location elements of a data unit.”).

Limitation “C” specifies that each data unit is defined based on at least one of: at least one string, at least one absolute position of the data unit within the input file, at least one relative position of the data unit to a start or end of at least one of a row or column of the input file, and at least one relative position of the data unit to another data unit.

In the Answer at page 10, second paragraph, the Examiner again accuses the Appellants of “mak[ing] the biggest leap” in regard to limitation “C” by allegedly arguing that “because the specification discloses that the invention should not be limited to the [enumerated] five types data units and that any data units for data locating may flexibly be incorporated when needed; then, the applicant can claim any type of data unit with any data limitation.”

Appellants respectfully submit that the Examiner has grossly mischaracterized both the scope of limitation “C” and the Appellants’ arguments. Limitation “C” in fact restricts the scope of claim 23 by specifying that each data unit must be defined based on at least one of a series of four enumerated options, each of which is explicitly described and enabled by the originally-filed specification.

For example, the first, second and fourth “options” recited in limitation “C,” namely “at least one string,” “at least one absolute position of the data unit within the input file,” and “at least one relative position of the data unit to another data unit,” correspond respectively to the first, third, and second “manners” enumerated in the specification at page 20, line 22, to page 21, line 4:

The first is to locate a data unit by string matching, the second is to locate a data unit by the relative coordinates between the data units, the third is to locate a data unit by the absolute coordinates of the data unit.

The third “option” recited in limitation “C,” namely, “at least one relative position of the data unit to a start or end of at least one of a row or column of the input file,” is described and enabled by the specification at, for example, page 18, lines 7-11:

Specifically, the value of the attribute “Base” may be the ID of a “data unit” having been located, such as the ID of the data unit having the type of “Text”, or “the start of a line (RB)”, “the end of a line (RE)”, “the start of a column (CB)” and “the end of a column (CE)”. “The start of a line (RB)”, “the end of a line (RE)”, “the start of a column (CB)” and “the end of a column (CE)” all refer to the line or the column the “Base” currently located.

In view of the above, Appellants respectfully maintain that claims 23-42 are believed to be both described by and enabled by the originally-filed specification in accordance with 35 U.S.C. §112, first paragraph.

2. Rejection of claims 23-42 under 35 U.S.C. §102(b)

Claims 23-26, 29-33, 36-39 and 42

Appellants initially note that the Federal Circuit has recently stated that “unless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. §102.” *Net MoneyIN Inc. v. VeriSign Inc.*, 545 F.3d 1359, 1369, 88 USPQ2d 1751, 1760 (Fed. Cir. 2008)

Claim 23 includes a limitation, heretofore identified as limitation “B,” specifying that each location comprises a horizontal position and a vertical position. Claim 23 also includes a limitation, heretofore identified as Limitation “C,” which specifies that each data unit is defined based on at least one of: at least one string, at least one absolute position of the data unit within the input file, at least one relative position of the data unit to a start or end of at least one of a row or column of the input file, and at least one relative position of the data unit to another data unit. As discussed in the Appeal Brief, Barr fails to disclose at least these limitations of claim 23.

In the Answer at page 11, first paragraph, the Examiner contends that “absent enablement and guidance from the specification, the office was forced to rely on the knowledge known to one skill in the art in rejecting the claim limitations” and thus “the reference anticipates the claim limitations . . . in such [sic] much as could be understood in light of the rejections under 35 USC 112.”

As discussed above, Appellants respectfully assert that claims 23-42 are both described and enabled by the originally-filed specification and the §112 rejections are improper. Nonetheless, Appellants respectfully submit that it is well-established law that even limitations which are unsupported by the originally-filed specification are to be fully considered in determining issues of patentability over the prior art. As such, the §112 rejections, even if valid, should be inapposite to the §102 rejection, despite the Examiner’s apparent contention to the contrary.

See *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983) (“All of these limitations of the claims must be considered regardless of whether or not they were supported by the specification as filed.”); *In re Miller*, 441 F.2d 689, 169 USPQ 597 (C.C.P.A. 1971) (“[T]he section 102 rejection in this case is not unlike the section 103 rejection which we reversed in *In re Wilson*, 57 CCPA 1029, 424 F.2d 1382, 165 USPQ 494 (1970), and is unsupportable for the same reason: ‘All words in a claim must be considered in judging the patentability of that claim against the prior art’”)

In the Answer at page 11, second paragraph, through page 13, first paragraph, the Examiner expounds at great length as to why the limitations of claim 23 heretofore identified at limitations “B” and “C” are “not given patentable weight.” Appellants respectfully submit that the Examiner’s failure to consider these limitations is improper and constitutes piecemeal examination of the sort specifically prohibited by MPEP 707.07(g). See also *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970) (“All words in a claim must be considered in judging the patentability of that claim against the prior art.”)

On page 11, last paragraph, the Examiner argues that “these limitations are non descriptive material which do not exhibit a functional relationship with a substrate and therefore do not affect the manner in which the computer processes are performed.” It is important to note that claim 23 is directed to a method, rather to either functional or nonfunctional descriptive material, and hence this argument is inapposite to the issue of the patentability of claim 23.

Appellants respectfully submit that the concept of “nonfunctional descriptive material,” as well as each of the cases cited in this paragraph, pertains to the issue of whether a claim is directed to statutory subject matter under §101. See, e.g., MPEP 2106.01 (discussing “nonfunctional descriptive material” in a section entitled “Computer-Related Nonstatutory Subject Matter”). The arguments presented by the Examiner are inapposite to the separate issue of whether claim 23 satisfies the novelty requirement set forth in §102. See, e.g., MPEP 2106.01 (“USPTO personnel must consider all claim limitations when determining patentability of an invention over the prior art. USPTO personnel may not disregard claim limitations comprised of printed matter.”) (citing *In re Gulack*, 703 F.2d 1381, 1384-85, 217 USPQ 401, 403-04 (Fed. Cir. 1983)).

In the Answer at page 12, last paragraph, the Examiner appears to characterize limitations “B” and “C” as being one or more of “claim language that suggests or makes options but does not require steps to be performed,” “claim language that does not limit a claim to a particular structure,” and a simple expression of an “intended result of a process step positively recited.” In making this assertion, the Examiner relies upon *Minton v. Nat’l Ass’n of Securities Dealers, Inc.*, 336 F.3d 1373, 1381, 67 USPQ2d 1614, 1620 (Fed. Cir. 2003), as cited in MPEP 2111.04. However, it should be noted that the MPEP section in question reads, in relevant part:

The determination of whether each of these clauses [e.g., ‘adapted to,’ ‘adapted for,’ ‘wherein,’ and ‘whereby’ clauses] is a limitation in a claim depends on the specific facts of the case.” In *Hoffer v. Microsoft Corp.*, 405 F.3d 1326, 1329, 74 USPQ2d 1481, 1483 (Fed. Cir. 2005), the court acknowledged (quoting *Minton*, 336 F.3d at 1381, 67 USPQ2d at 1620) that a “whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited,” but then held that when a whereby “clause states a condition that is material to patentability, it cannot be ignored in order to change the substance of the invention.”

Indeed, Appellants respectfully submit that the claim limitations at issue are analogous to that upheld in *Hoffer*, in which the whereby clause described “a network of users at multiple remote user terminals who are ‘collectively able to concurrently engage in interactive data messaging.’ This capability is more than the intended result of a process step; it is part of the process itself.” 405 F.3d at 1329, 74 USPQ2d at 1483. Limitations “B” and “C” recite parts of the process itself rather than simple expressions of intended results of process steps. Accordingly, these claims should be afforded patentable weight.

Moreover, these clauses state conditions that are material to patentability. Appellants note that a claim is anticipated “only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Indeed, the reference must disclose “within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim.” *Net MoneyIN Inc. v. VeriSign Inc.*, 545 F.3d 1359, 1369, 88 USPQ2d 1751, 1760 (Fed. Cir. 2008)

(emphasis added) In this case, Appellants assert that Barr clearly fails to teach or even suggest each and every limitation of the claims. For example, Barr does not disclose the limitations of claim 23 heretofore referred to as limitations “B” and “C” and hence fails to anticipate claim 23.

Claim 23 includes a limitation, heretofore identified as limitation “B,” specifying that each location comprises a horizontal position and a vertical position. These locations refer to locations of a data unit within an input and/or output file. As discussed in the Appeal Brief, the Examiner argues that this limitation is disclosed by Barr at page 23, second paragraph, which describes “a symbol table somewhere in the object file that contains the names and locations of all the variables and functions referenced within the source file.” However, the location recited in Barr does not comprise a horizontal position and a vertical position, but rather is a single numerical value defining a logical address in terms of a memory offset. See Barr at page 23, fifth paragraph (“[I]f foo is located at offset 14 of the output data section, its entry in the symbol table will now contain that address.”)

Claim 23 also includes a limitation, heretofore identified as Limitation “C,” which specifies that each data unit is defined based on at least one of: at least one string, at least one absolute position of the data unit within the input file, at least one relative position of the data unit to a start or end of at least one of a row or column of the input file, and at least one relative position of the data unit to another data unit. As discussed in the Appeal Brief, the Examiner argues that this limitation is met by Barr at page 23, first paragraph, which specifies that “each of these sections contains one or more blocks of code or data that originated within the original source file.” Appellants respectfully submit that the relied-upon portion of Barr fails to teach that the specific arrangement recited in claim 23 wherein each data unit is defined based on a string and/or an absolute or relative position.

Indeed, Appellants note that the Examiner, at page 13, second paragraph, concedes that Barr fails to disclose limitations “B” and “C” of claim 23: “Barr teaches that a symbol table somewhere in the object file that contains the names and locations of all the variables and functions referenced within the source file and that each of these sections contains one or more blocks of code or data that originated within the original source file, which meet the limitations under 35 USC 102 in light of the rejection under 35 USC 112, first paragraph.” (internal citations omitted and emphasis added)

Independent claims 30 and 37 include limitations similar to those of claim 23, and are therefore believed to be patentable over the prior art for reasons similar to those described above with reference to claim 23.

With regard to claims 24-26 and 29, which depend from claim 23, claims 31-33 and 36, which depend from claim 30, and claims 38, 39 and 42, which depend from claim 37, Appellants assert that these claims are also patentable over the prior art of record by virtue of their dependency from their respective base claims.

Claims 27, 34 and 40

In the Answer at page 14, first paragraph, the Examiner argues that “Barr teaches generating plural object files from one input file or program, which has ‘parts’ written in different languages. Therefore, Barr in fact meets the[se] claims’ limitations.”

Appellants respectfully submit that the relied-upon portion of Barr states that “[i]f you’ll be using more than one compiler (i.e., you’ll be writing parts of your program in different source languages), you need to make sure that each is capable of producing in the same format.” One skilled in the art would understand that a program may comprise a plurality of input files written in different source languages and processed using different compilers to produce a plurality of object files, which preferably are produced using a same format. However, a given one of these input files (corresponding a part of a program) is written in a single source language and is processed using a single compiler. Thus, Appellants maintain that the relied-upon portion of Barr is directed to generating different object files from different input files written in different source languages, rather than generating a plurality of output files from the same at least one input file, as recited in claim 27.

Moreover, even if one were to accept the Examiner’s characterization of the relied-upon disclosure of Barr as teaching “generating plural object files from one input file,” Barr would still fail to teach the limitation of claim 27 directed to generating a second output file from the at least one input file by transferring the at least one instance of the data unit from the one or more locations within the at least one input file to the one or more locations within the second output file specified

by the mapping of the at least one data unit of the at least one input file to one or more locations within the first output file, and would therefore fail to anticipate claim 27.

Dependent claims 34 and 40 include limitations similar to those discussed with reference to claim 27, and are therefore believed to be patentable for similar reasons.

Claims 28, 35 and 41

In the Answer at page 14, first paragraph, the Examiner argues that “Barr teaches generating plural object files from one input file or program, which has ‘parts’ written in different languages. Therefore, Barr in fact meets the[se] claims’ limitations.”

Appellants respectfully submit that the relied-upon portion of Barr states that “[i]f you’ll be using more than one compiler (i.e., you’ll be writing parts of your program in different source languages), you need to make sure that each is capable of producing in the same format.” One skilled in the art would understand that a program may comprise a plurality of input files written in different source languages and processed using different compilers to produce a plurality of object files, which preferably are produced using a same format. However, a given one of these input files (corresponding a part of a program) is written in a single source language and is processed using a single compiler. Thus, Appellants maintain that the relied-upon portion of Barr is directed to generating different object files from different input files written in different source languages, rather than generating a plurality of output files from the same at least one input file, as recited in claim 28.

Moreover, even if one were to accept the Examiner’s characterization of the relied-upon disclosure of Barr as teaching “generating plural object files from one input file,” Barr would still fail to teach the limitation of claim 28 directed to generating a second output file from the at least one input file by transferring the at least one instance of the data unit from the one or more locations within the at least one input file to one or more locations within the second output file specified by a mapping of the at least one data unit of the at least one input file to one or more locations within the second output file.

Dependent claims 35 and 41 include limitations similar to those discussed with reference to claim 28, and are therefore believed to be patentable for similar reasons.

In view of the above, Appellants believe that claims 23-42 are in condition for allowance, and respectfully request reversal of the pending rejections.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'David E. Shifren', written in a cursive style.

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